Usage Scenario

The creative merging of datasets collected from patients and doctors could be a viable avenue to strengthen healthcare treatments. In these dire times where COVID-19 has gotten even harder to deal with, people might find it daunting and cannot help but feel responsible for providing their medical history to the physicians. In order to maintain limited access to these pieces of sensitive information, create a sustainable work environment and safely store the medical records of the patients, we plan to create a digitalized medical report system. The demand for this kind of management system has risen due to COVID outbreak, which has halted the physical workflow with the user having to navigate an unknown online workplace where they cannot help but self-diagnose themselves by reading articles and watching the news. So, with this digitalized medical report, we want to bring safety towards the ongoing patients who are bound to see doctors, and hence reduce their waiting time as well.

The actors of this management system are: Doctors, Patients and Admin with the Admin being the secondary actor in both of the cases.

Doctors:

In this management system, the new doctors will have to register first by providing their personal details as well as their professional credentials, which the administrative body has to verify. After the completion of the verification process, the regular doctors will be able to log-in into the system and update their credentials if needed, which also has to be verified by the admin. One of the main features we have added for the doctors is that they can access the patients' medical reports and they can give professional suggestions to the patients. However, the doctors will only be able to view the monthly evaluations on them.

Patients:

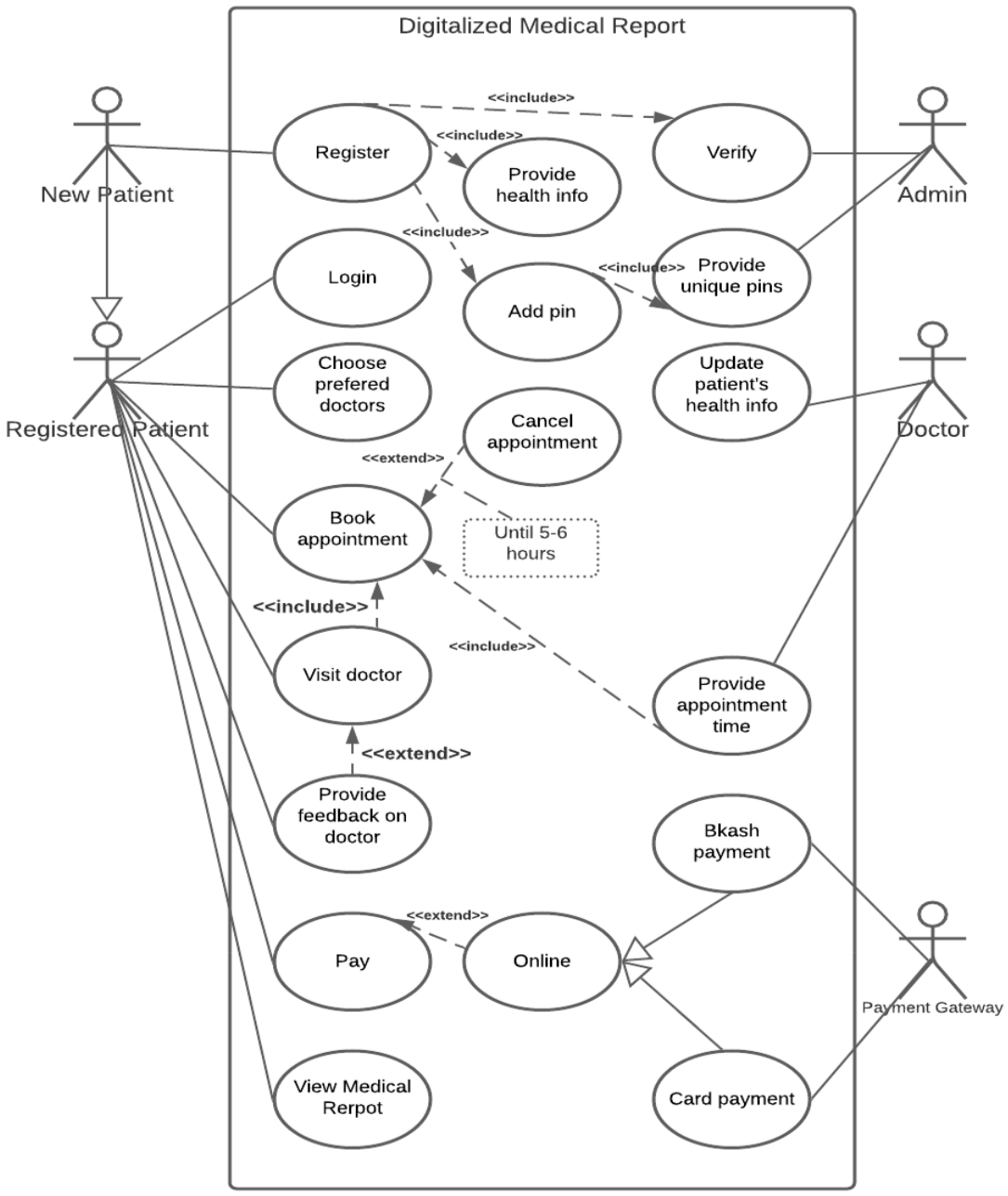
A new patient will have to register into the system by providing their personal information along with their past medical reports and the unique PINS given to them by the administrative body before they can fully access the system. The registration is completed after the administrative body has verified their information. After logging into the system, the patients will be able to choose their preferred doctor and book appointments after their preferred doctor has provided them with the appointment time. Furthermore, they can also cancel their appointment if needed within a specific period of time say 5-6 hours. After the visit to the doctors, the patients can choose to pay online through the system. Online payment can be done either through Bkash, or by Card, which is handled by the Payment Gateway. The patient can then write feedback regarding their doctor or their experience while using the system. Finally, the patient can view their previous medical reports whenever they want to, in case they need the report while on medication or other needs.

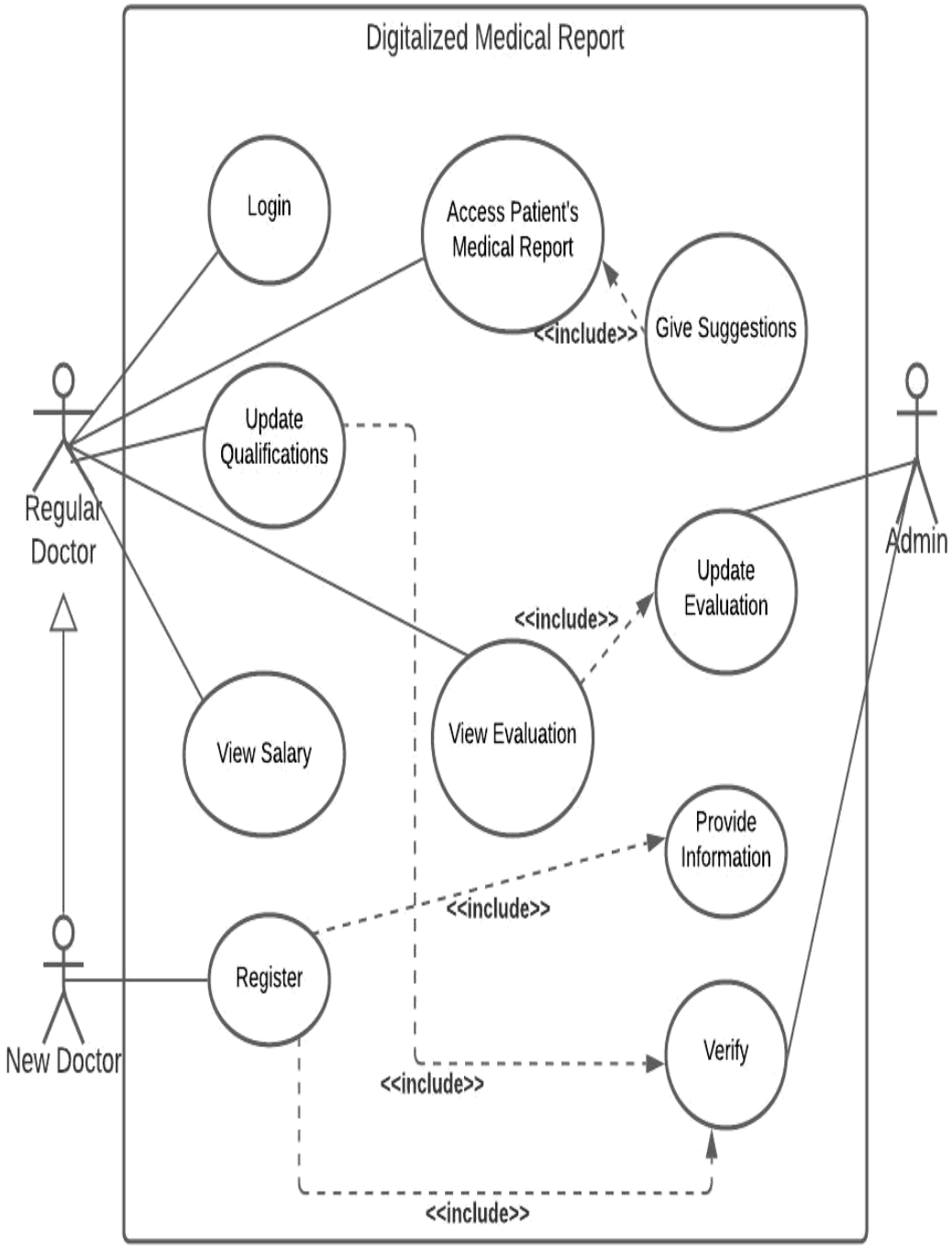
Admin:

The administrative body verifies the registration of the new doctors as well as the patients but in addition, they also check the validity of the doctors' updated and already existing credentials and provides unique PINS to the patients before the completion of their registration. The administrative body works as a secondary actor in the use case for both the patient as well as the doctor.

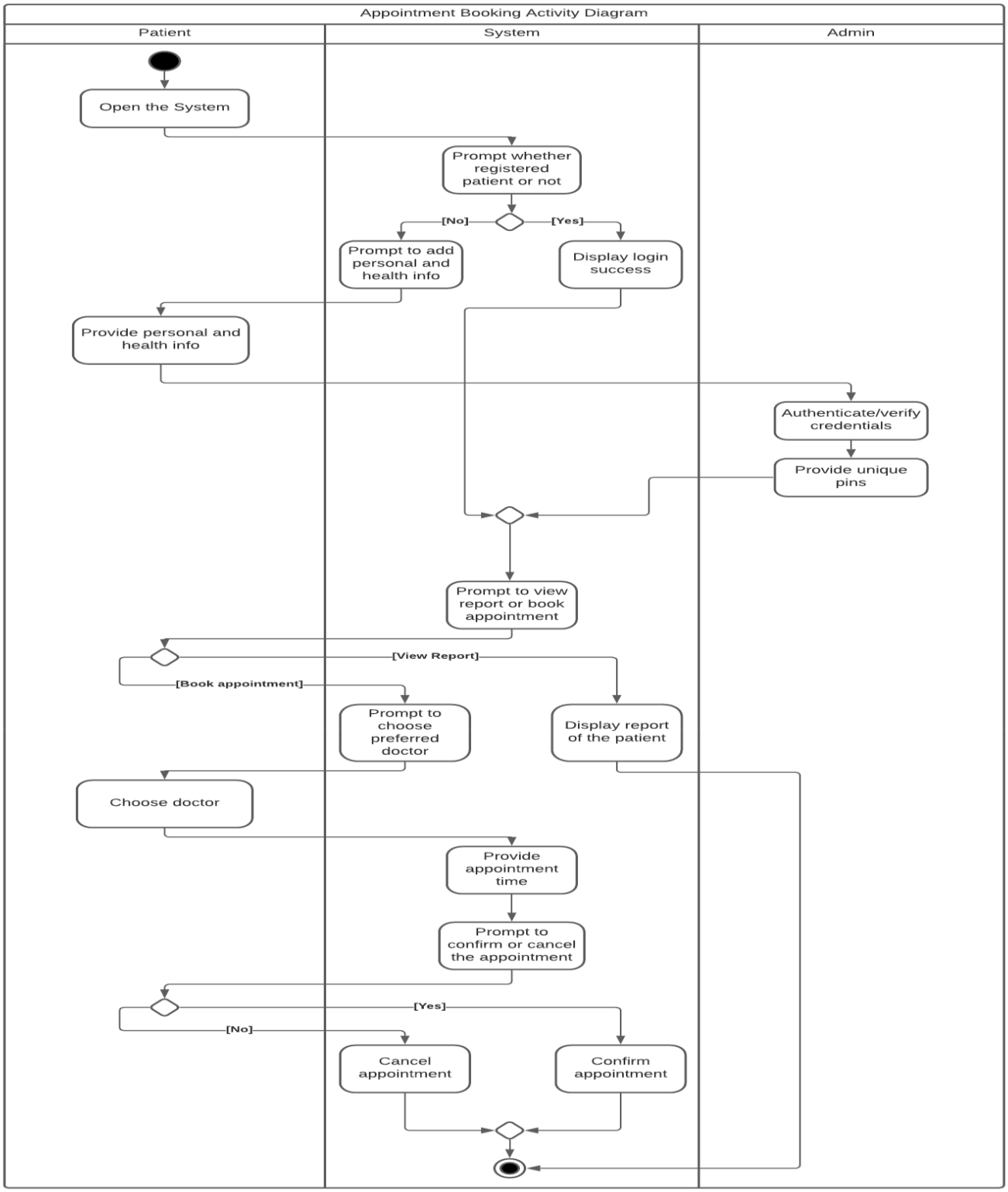
Design Diagram

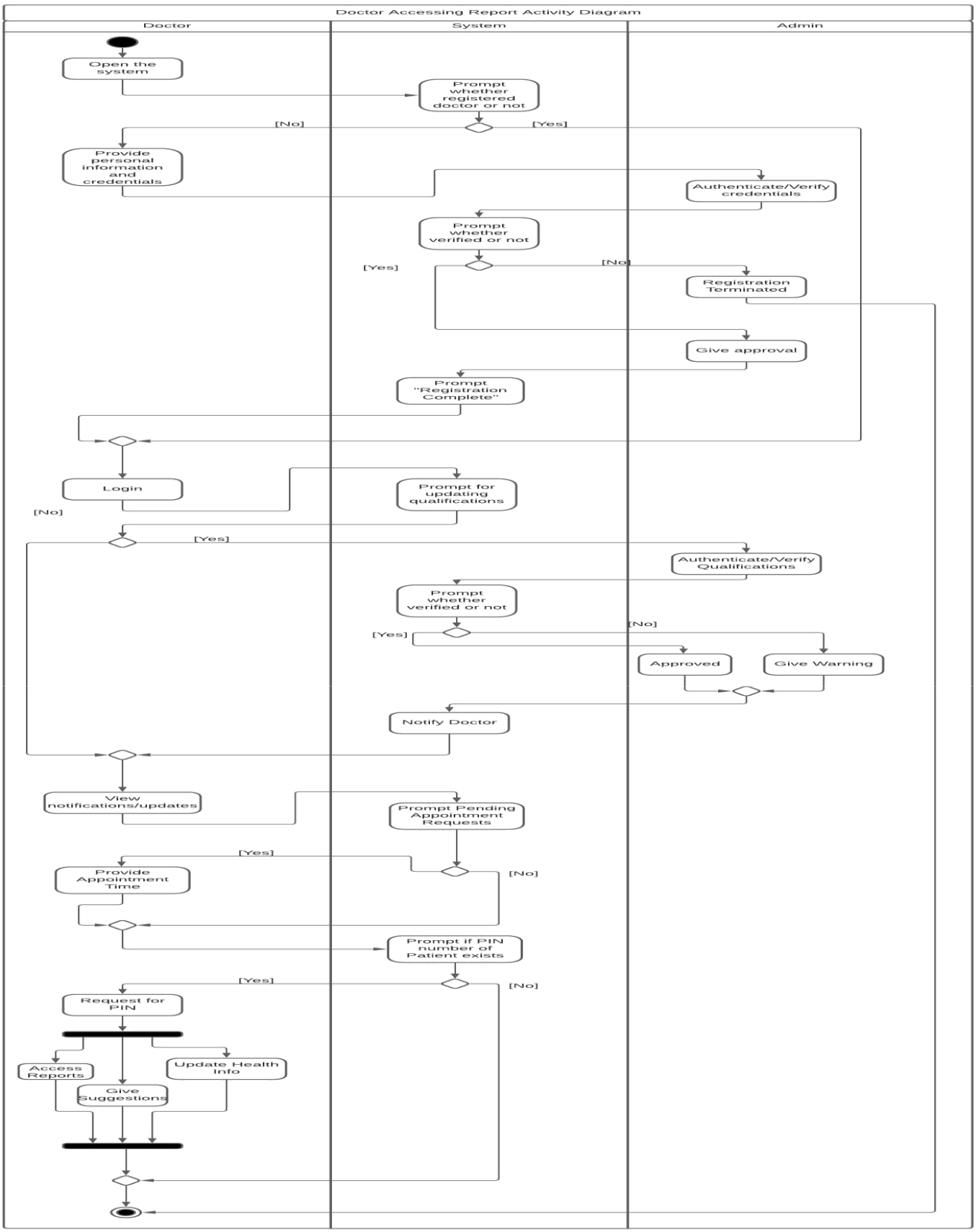
Use Case Diagrams:




Digitalized Medical Report
Login
Access Patient's Medical Report
Give Suggestions
<<include>>
Update Qualifications
Regular Doctor
Admin
Update Evaluation
<<include>>
View Evaluation
View Salary
Provide Information
<<include>>
Register
New Doctor
Verify
<<include>>
<<include>>

Activity Diagrams:




Doctor Accessing Report Activity Diagram
Doctor
System
Admin
Open the system
Prompt whether registered doctor or not
[No]
[Yes]
Provide personal information and credentials
Authenticate/Verify credentials
Prompt whether verified or not
[Yes]
[No]
Registration Terminated
Give approval
Prompt "Registration Complete"
Login
[No]
Prompt for updating qualifications
[Yes]
Authenticate/Verify Qualifications
Prompt whether verified or not
[Yes]
[No]
Approved
Give Warning
Notify Doctor
View notifications/updates
Prompt Pending Appointment Requests
[Yes]
Provide Appointment Time
[No]
Prompt if PIN number of Patient exists
[Yes]
[No]
Request for PIN
Access Reports
Update Health Info
Give Suggestions